SAF-RC-001 **Industrial Hygiene Sampling FINAL DATA**

NO DISTRIBUTION REQUIRED

COMMENTS:

SDG <u>06I-0510-01</u> SAF-RC-001

Rad only X Chem only Rad & Chem

X Complete **Partial**

300 Area 333 Bldg







Cover Page

Report Identification Number: 06I-0510-01

Subcontract Number: 0000X-BO-G0058-B-Mod#4

Name of Industrial Hygienist:

Denise A. Pitts / Henry W. Ruby

Laboratory Identification Number: DCHM

SAF#: RC-001 / R33300J451

Payroll#: 72520



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Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
06 Feb 2006	J113M3	06104255	NMAM 7300M	G061700X	MCE
06 Feb 2006	J113M4	06I04256	NMAM 7300M	G061700X	MCE
06 Feb 2006	J113M5	06104257	NMAM 7300M	G061700X	MCE
06 Feb 2006	J113M6	06104258	NMAM 7300M	G061700X	MCE

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Phone: (801) 266-7700

FAX: (801) 268-9992

Name: Joanna C. Sanchez

Title: Chemist

Date: February 10, 2006





Case Narrative Page

Report Identification Number: 06I-0510-01

Subcontract Number: 0000X-BO-G0058-B-Mod#4

Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby

Laboratory Identification Number: DCHM

SAF#: RC-001 / R33300J451

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General Set Information: There are 4 samples in set 06I-0510-01 which were analyzed for beryllium, lead and cadmium on MCE filter. No problems were encountered with the receipt of these samples and no contact with the CTR was required.

Method Summary: Samples were transferred to 50 ml centrifuge tubes and digested in the presence of 10 mL of 1:1 (v/y) nitric acid. Samples were digested in a hot block set at 110°C for 40 minutes. Samples were then diluted to a 25 mL volume with ASTM Type II Water. Samples were shaken and delivered for ICP analysis.

Sample Preparation: All samples were prepared in accordance with DCL SOP "IH-AN-021" and NIOSH method NMAM 7300 modified for hot block digestion.

Holding Times: The holding times were met for both sample preparation and analysis.

Instrument Calibration: Instrument calibration was performed in accordance with NIOSH method NMAM 7300.

Initial and Continuing Calibration Verification Analysis: Beryllium, cadmium and lead recoveries in all Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) samples are within the quality control limits of +/- 10%.

Initial and Continuing Calibration Blank Analysis: No beryllium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 0.01 ug/sample. No cadmium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 0.08 ug/sample. No lead results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 1. ug/sample.

Method Blank Analysis: No beryllium, cadmium or lead was found in the media blank sample above the Contract Required Detection Limit (CRDL).

Dilution(s): NA.

DataChem Laboratories, Inc. 960 West Levoy Drive Salt Lake City, Utah 84123-2547 Phone: (801) 266-7700

FAX: (801) 268-9992

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Case Narrative Page

Laboratory Control Sample and Duplicate Analysis: One Laboratory Control Sample (LCS) and one Laboratory Control Sample Duplicate (LCSD) were prepared and analyzed with the sample batch. The LCS result was within the control limit of +/- 20%. The Relative Percent Differences (RPD) between the LCS and the LCSD was within the control limit of 20%.

<u>Replicate Analysis:</u> One sample was replicated with this analysis run. The RPD between the sample and the replicate was within the control limit of 20%. If the result of the sample or replicate is below the CRDL, replicate analysis is negligible.

Flagging Codes: None

Nonconformance/Corrective Action Report (NC/CAR): N/A

Sample Calculation: The final results are calculated by the following equation:

Final result for aqueous samples (μ g/sample) = (A) x (B) x (C)

Where:

A = Analyte concentration from instrument determination ($\mu g/L$)

B = Concentration factor from sample preparation

= <u>Final Volume of Digestate (L)</u> Sample

C = Dilution performed at time of analysis

Example Calculation: $(1 \mu g/L) \times (0.025 L/sample) \times (1) = 0.025 \mu g/sample$

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Miscellaneous Comments: None.





Report Page

Report Identification Number: 06I-0510-01

Subcontract Number: 0000X-BO-G0058-B-Mod#4

Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby

Laboratory Identification Number: DCHM

SAF#: RC-001 / R33300J451

Payroll#: 72520

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Berylliun µg/sampl		Berylliun µg/m³	n	Air Volume L
J113M3	06104255	08 Feb 2006	<0.01	U	**		**
J113M4	06104256	08 Feb 2006	<0.01	U	**		**
J113M5	06104257	08 Feb 2006	< 0.01	Ü	< 0.015	U	689.
J113M6	06104258	08 Feb 2006	< 0.01	Ū	< 0.017	U	577.
	Limit of I	Detection (LOD)	0	.01			
R	equired Detect	ion Limit (RDL)					

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Lead μg/sampl	e	Lead μg/m³		Cadmiun µg/sampl	
J113M3	06104255	08 Feb 2006	<1.	U	**		<0.08	U
J113M4	06104256	08 Feb 2006	<1.	U	**		<0.08	U
J113M5	06I04257	08 Feb 2006	1.9		2.7		0.13	
J113M6	06104258	08 Feb 2006	<1.	Ū	<1.7	U	<0.08	U
	Limit of I	Detection (LOD)		1.			0	.08
R	equired Detect	ion Limit (RDL)			- <u>-</u>			

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Cadmiun µg/m³	1
J113M3	06104255	08 Feb 2006	**	
J113M4	06I04256	08 Feb 2006	**	
J113M5	06I04257	08 Feb 2006	0.19	
J113M6	06104258	08 Feb 2006	<0.14	U
	Limit of I	Detection (LOD)		
R	equired Detect	ion Limit (RDL)		

- U Parameter not detected above LOD.
- J Parameter between LOD and RDL.





QC Summary Page

Report Identification Number: 06I-0510-01

Subcontract Number: 0000X-BO-G0058-B-Mod#4

Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby

Laboratory Identification Number: DCHM

SAF: RC-001 / R3330 J451

Payroll#: 72520

Batch ID: G061700X

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
BL-241082-1	MB	Beryllium	μg/sample	ND	NA	NA	NA	NA
BL-241082-1	MB	Lead	μg/sample	ND	NĀ	NA	NA	NA
BL-241082-1	MB	Cadmium	μg/sample	ND	NA	NA	NA	NA
QC-241082-1	LCS	Beryllium	μg/sample	11.0	NA	10.0	110.	NA
QC-241082-1	LCS	Lead	μg/sample	110.	NA	100.	110.	NA
QC-241082-1	LCS	Cadmium	μg/sample	33.7	NA	30.0	112.	NA
QD-241082-1	LCSD	Beryllium	μg/sample	10.9	11.0	10.0	109.	0.639
QD-241082-1	LCSD	Lead	μg/sample	108.	110.	100.	108.	1.35
QD-241082-1	LCSD	Cadmium	μg/sample	33.4	33.7	30.0	111.	0.818

MB - Method Blank

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MSD - Matrix Spike Duplicate

LD - Laboratory Duplicate

NA - Not Applicable

ND - Parameter not detected above LOD

LCS, LCSD Percent Rec. = (Result / Target) * 100.0

MS, MSD Percent Rec. = ((Result – Parent) / Target) * 100.0

LCS, LCSD Relative Percent Diff. = ((|LCS - LCSD|) / ((LCS + LCSD)/2.0)) * 100.

MS, MSD Relative Percent Diff. = ((|MS - MSD|)/((MS + MSD)/2.0)) * 100.

LD Relative Percent Diff. = ((|Parent - LD|) / ((Parent + LD)/2.0)) * 100

Phone: (801) 266-7700 FAX: (801) 268-9992

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COC Page

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COC Page

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